

AMATEUR RADIO



Published in the interests of the Wireless Institute of Australia, Official Organ of all divisions of the W.I.A. and R.A.A.F.W.R.



PRICE
6^d

OCTOBER, 1937

AMATEUR RADIO

Published by the Wireless Institute of Aust., Victorian Division.

Vol. 5 No. 10

1st October, 1937.

INDEX

Editorial	2	And out of the Mouths of Babes ...	14
Break-In Operation ...	4	28 & 56 M.C. Notes ...	15
M.O.P.A. Rig using 58 Type Tubes ...	7	Divisional Notes—	
Australian National Field Day ...	9	N.S.W.	16
Radio - and How ...	10	Victoria	20
Federal and Victorian QSL Bureau	12	Queensland Division ..	22
A Brief Description of VK4RF ...	13	South Australian Division ..	23
		R.A.A.F. Wireless Reserve Notes	27

Divisional Addresses:-

FEDERAL HEADQUARTERS ..	BOX 2127L, G.P.O., SYDNEY
NEW SOUTH WALES ..	BOX 1734JJ, G.P.O., SYDNEY
VICTORIA ..	BOX 2611W, G.P.O., MELBOURNE
QUEENSLAND ..	BOX 1524V, G.P.O., BRISBANE
SOUTH AUSTRALIA ..	BOX 284D, G.P.O., ADELAIDE
WEST AUSTRALIA ..	62 SUBIACO ROAD, SUBIACO
TASMANIA ..	BOX 547E, G.P.O., HOBART

Magazine Committee:-

Editor—W. R. GRONOW (VK3WG).

Technical Editor—R. H. CUNNINGHAM (VK3ML); Notes—C. SERLE (VK3RX);

Compilation—V. E. MARSHALL (VK3UK);

Secretary—J. G. MARSLAND (VK3NY).

All Communications and MSS. should be forwarded to the Editor, "Amateur Radio," BOX 2611W, G.P.O., MELBOURNE.

Subscription to "Amateur Radio" is 6/- per Annum (Post Free), paid in advance.

Should you not receive your copy of "Amateur Radio," notify your Divisional Secretary at once.

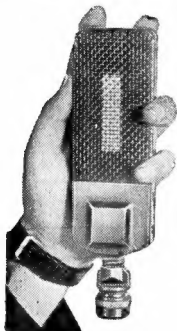
Advertising and Publishing Office: Address Publicity Manager, "Amateur Radio," Whitehorse Road, Box Hill, E.11. Phone: WX 2429.

NOTE.—ADVERTISERS' CHANGE OF COPY MUST BE IN HAND NOT LATER THAN THE 20th OF THE MONTH PRECEDING PUBLICATION.

AUSTRALASIAN ENGINEERING EQUIPMENT CO.
PTY. LTD.

"Evans House," 415 Bourke Street, Melbourne, C.1.

"Bruno" Velocity Mike



as used by

Leading American
Stations

|||||

LIST PRICE £10-10-0

FULL PARTICULARS ON
APPLICATION

Has a Frequency response plus or minus db from
50 to 12000 cycles]

BIRNBACH PORCELAIN INSULATORS

"BIRNBACH" Insulators are made in White and Brown Porcelain. Types with prefix J denote Jack Type for Standard G.R. Plug. All others are fitted with Screws.

For a Special Quote on these lines SEE US.

Type	Height	Price	Type	Height	Price
458	1	1/8	866	1 5/16	1/8
478	1	2/6	866J	1 5/16	2/-
478J	1	3/-	966	1in.	1/2
4125	1 1/2	3/-	966J	1in.	1/6
4125J	1 1/2	3/6	400	G.R. Plug	1/6



FINE GRANULE MICROPHONE CARBON

We have small supplies of this carbon in stock, of the Polished Granule Type which we can sell to Amateurs only at 12/6 an ounce nett.

EDITORIAL

In this issue are published details of Australia's first National Field Day and Federal Headquarters are to be commended on filling such a long felt want in the Ham Life of this country. A National Field Day whilst being a contest in the sense that a keen competitive spirit will be present, is far more than a mere competition. In a Ham world over run with contests it should become, and we forecast will become, the most popular event in the year and should remain an Annual event when many other contests are being scrapped. Federal Headquarters are to be congratulated also on the rules they have framed which, whilst providing ample latitude in every way, ensure that the stations competing will be true to the title of 'portable.'

To those Amateurs who have participated in local field days, on various occasions no word need be said as they are certain starters, but to those who have never experienced the thrill of QSO's from a field location, you can take our word for it you will only need to try once to be a regular competitor.

Here is a test where everyone starts from scratch. A missed QSO cannot be blamed to the other fellow's QRO; if he is working DX that you cannot hear there is only one person to blame, you chose the location. The winner will be worthy of the title National Field Champion in every sense of the word, for he will have to bring into play, as well as possess, every requirement of the real Ham. He will have to be a good operator with a pair of 'DX ears,' he must use all his ingenuity and radio knowledge in order to design a receiver and transmitter flexible enough to avail himself of all that rules allow and yet still have power equipment that IS portable. In addition his equipment must be

rugged and efficient to stand the racket of a portable location and twenty four hours continuous operation.

There is the aspect of emergency operation also that will be brought out during this week-end. We are fortunate indeed that Australia has never suffered the appalling disasters that have befallen other parts of the world from time to time and thus as Amateurs we have never been called upon to play part that some W.'s ZL's etc. have during a sudden tornado, earthquake or flood. Our first National Field Day will not only provide the reason for many who do not possess portable equipment to build some, but also will bring home forcibly the potential value of Amateur Radio in supplying vital communications at a moment's notice. So we make one plea, design this portable gear with the idea of permanency in mind so that a holiday, a Sunday outing or the next National Field Day will find you with an outfit ready to take along. In addition you will have the certain knowledge that you are prepared if ever you should be called upon for assistance in a time of National disaster.



Break-In Operation

by "Long Line."

This article has been written as a follow up, on the excellent case for Break-in as put by 3BG in the September issue of "Amateur Radio."

Most that has been said is very true and to the point.

There is, however, one remark to which exception may be taken.

That is the statement that Break-in can NOT be applied to Phone.

Perhaps the greatest claim for the universal adoption of Break-in is the fact, that it is only necessary to use one channel when working a Two-way contact.

Who, amongst us, has not at some time or another heard a working single way; on coming back start his reply with "Sorry O.M. Only got a little of that over. Bad QRM Here."

How different would have been the case had Break-in been in use. During silent periods, such as deep (?) thought, etc., the Mitter would be off and the Receiver on. It is, then, only necessary for the other party to call and ask one to QRX until the channel clears.

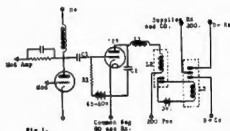
The application of Break-in to a Phone Transmitter is in fact an extremely simple matter.

Fig. 1. depicts a system requiring very little gear that cannot be produced by the average Ham.

A brief study of the circuit will indicate the theory of operation. When the transmitter, and consequently the Mod., is at rest the bias applied to the '27 reduces the plate current to zero, hence the relay L2 is open, so also then, is the control relay L3. This places the plate voltage on the receiver. Immediately the microphone is excited there is an audio frequency voltage appearing across the condenser C1, this bucks the bias and results in a flow of current in the plate circuit of the '27,

thus closing the relay L2. This in turn results in the relay L3 being closed thus removing the voltage from the receiver and applying it to the C.O. plate.

The speed at which the transmitter is thrown on the air depends on the adjustment of the tension



- FIG. 1.
- C1. .01mf Mica
 - C2. 1. mf Paper
 - R1. 50,000 Carbon
 - L1. 30 henry
 - L2. 4,000 ohm s.p.s.t. Relay
 - L3. Low resistance s.p.d.t. Relay, normally closed one side. (B+. Rx.)

spring on the relay L2 in the plate circuit of the '27. The lag, or abruptness, with which the C.O. plate supply is cut off depends on the value of the grid resistor R1 in series with the "C" bias of the '27. The 50,000 resistor specified, allows a pause in the conversation of approximately $\frac{1}{2}$ of a second before the carrier is cut off.

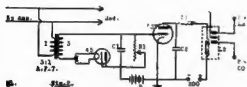
Phone station using this system of Break-in consider that it more than repays the initial cost of installation.

Before leaving this method, it would be well to mention that the control tube may be connected across the Mod. Driver or Sp. Amp. provided that sufficient voltage swing is available.

The second system of Break-in shown in Fig. 2. dispenses with one

relay but involves the use of another tube and an audio transformer.

Its system of operation is equally as simple as the previous one. When the microphone is excited there is, of course, audio audio frequency energy in the line Sp. Amp. to Mod. A small part of this alternating current goes through the audio transformer and hence to the '45 (any two or three element tube will work as well). This tube acts as a half wave rectifier and charges the condenser C1. Now the '27 is biased to cut-off and normally no current flows through the relay L2. This charge on the condenser C1., however, bucks the



- C1. 4.mf Paper
- C2. 1.mf Paper
- R1. 100,000 Carbon Pot
- B. Bias to Cut Off (approx. 45 v.)
- L1. 30 henry
- L2. 4,000 ohm s.p.d.t. relay, normally closed one side. (B+ RX)

A separate supply for the '27 is desirable.

N.B.—The transmitter and receiver Negs. must be common.

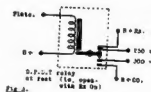
bias and allows plate current to flow in the relay winding L2. At this stage the receiver is made inoperative and the transmitter is thrown on the air. With a good relay all this takes place in a fraction of a second and little of the first word is lost.

The adjustment of the 100,000 resistor in the '27 grid circuit determines the length of time that the charge will remain on the condenser C1. after voice excitation ceases. The transmitter can be made to hang on for several seconds should the operator so desire. With the resistor R1. set to about half way the condenser C1. will hold its charge for about 1 to 1½ seconds. This is usually sufficient for normal pauses in conversation.

It would be well to note here, that if the transmitter hangs on for too long a period the value of Break-in is lost. The whole object of break-in is to allow the receiving party an opportunity to stop the transmitting party when QRM, or other reasons, oblige. It will readily be seen therefore, that if the Mitter is on during long periods of no Modulation the object is defeated.

Fig. 3. depicts the method of voltage connections when using a D.P. D.T. relay. The connections must be made in such a manner that when the relay is at rest the receiver contacts are closed. One advantage of the d.p.d.t. relay is that it is not necessary to connect the receiver and transmitter high voltage negatives to a common connection. A further advantage is the ability to use separate supplies for the receiver and C.O. high tension.

Although, in both the cases submitted to the reader, a high impedance relay has been specified, it is possible to obtain good results with a relay having an impedance of 1,500 ohms. It is, however, to be understood that the higher impedance relays are much more sensitive although they are not as strong in action as those of low impedance. This is due, of course, to the electrical set-up, which involves a consid-



eration of the current flowing in the circuit and the ampere turns on the magnet winding.

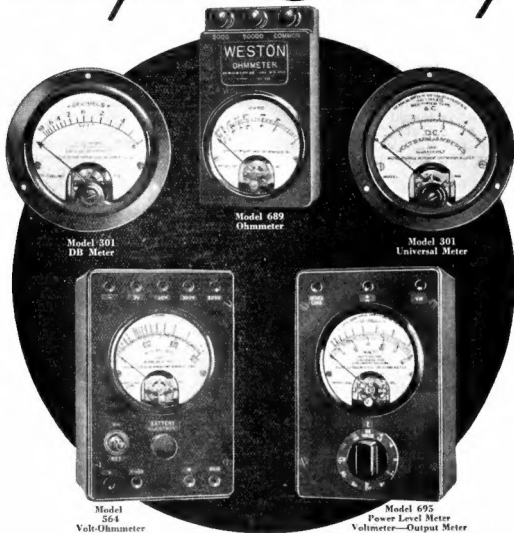
Some stations have had quite good success with old P.M.G. telephone relays revamped to suit their individual requirements.

In many cases although fine adjustments of the system in use have been made, the first part of the spoken word has been lost, viz: "How's that." becomes "Ow's That." This can be corrected by either drawing out the first syllable of the first

(Continued on Page 8)

Amateur Radio

Undisputed Leadership



WESTON

Radio and Electrical Instruments

WARBURTON FRANKI
LTD.

380 Bourke St, Melbourne; 307 Kent St, Sydney;
233 Elizabeth St, Brisbane

M.O.P.A. Rig using 58 Type Tubes

By Les. Tanner—VK2ABL.

Being interested in low powered transmission and about to build my transmitter my attention was drawn to the tubes of 57 and 58 types. I wondered if satisfactory output etc, could be had with these tubes as they did not require neutralizing and required very little drive. However very little is available on the subject using the tubes mentioned.

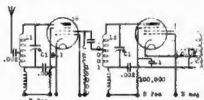
I then built an electron—coupled oscillator using a 58 tube and the output was very satisfactory the plate milliamperes were 12 mc dropping to 8 mc with the plate and grid circuits in tune and rising to 12 mc loaded. The plate voltage was 330 volts and the screen fed through a 100,000 ohm resistor by-passed by .1 ufd condenser. The suppressor was connected to earth. The stability of this oscillator was remarkable. It was unsatisfactory to use it as a self-excited transmitter as key clicks could not be stopped although inductance resistance and capacity were connected to the key also RF chokes etc.

A power amplifier was then added using again 58 tube and the results were all that could be desired. Clean keying, no clicks at all, enough output on 3.5 mc and 7 mc to blow 3.5 pen lamp, changing to 14 mc one has to change the PA and Osc plate coils and there is no neutralizing to be done.

The osc grid is set on 3.5 mc, the plate on 14 mc and the PA is a straight amplifier on this band. On 28 mc the osc plate is on 4th Harmonic, grid on 7 mc. Of course other methods could be used but this way suits me and cuts down coils to a minimum. The input to the PA is 8 ma rising to 12 ma with the aerial coupled with 330v on the plate. The power input is about 4 watts. Fair operation can be had with voltages as low as 150v at which the osc. draws 3 mc unloaded. As 6C6 and 6D6 tubes have the same characteristics as 57 and 58 filament except

of course, there seems no reason why they could not be used if one had them. Working from 250v dynamotor and using 6D6 E.C. osc and 6D6 PA and input of about 3 watts could be had and would be a fine little job for a country ham considering the rigs simplicity. Although the power input is low the output is rather high.

A 57 tube was tried in place of 58 but apart from reduction of plate mills no difference was noticed.



The 30-30 Transmitter.

	3.5	7	14	28
L1	25	—	8	—
L2	20	—	6	—
L3	12	—	—	—
Tap	—	—	direct	—
	10	—	from	—
L2	—	—	Pend.	—
Tap	3	—	—	—

L3
All coil except L3 Cover two bands.
L1:—22 swg 1.5" former.
spaced to cover 1.5"
L2
L3
24 swg 1.5" form close wound.
from B+ end
from "E" end.
C1.00015
C2.00035

Plate mc with 57 as E.C. osc were 6mA unloaded. Link coupling could be used but as only very little drive is required capacity coupling is quite ok. A 67' matched impedance aerial is used here with this transmitter and changing bands is a pleasure, one does not have to find many

coils (2) and then only when changing from 3.5 to 14 or 28 mc and as neutralizing and aerial tuning are absent the simplicity of this outfit speaks for itself. The rig is built on rack and panel lines here and is quite satisfactory from all angles.

If more power were needed two 58's could be used in push pull. I will gladly send any further information to any ham interested on writing to me. I understand that these tubes (58) can be used on 56 mc using the grid circuit of an E.C. oscillator on 28 mc and the plate on 56 mc followed by another 58 as buffer (or final) exciting further tubes but I have not gone that far yet.

As for the results with this transmitter, it is bad practice to talk about results as location, calling habits aerial etc. change so that a transmitter that is first class in one place will not necessarily be the same somewhere else but I have obtained R6-8 reports interstate with this rig and have not yet had sufficient time for decent results.

By using the oscillator plate circuit on a harmonic of the grid one obtains buffer action between the osc. and PA enabling the two stages to be run from one power supply without any difficulties whatever.

As the current to the PA does not exceed 15 MA the voltage variation should be small and the E.C. osc will take care of that.

(Continued from Page 5)

spoken word, or by resorting to that time honoured practice of whistling into the microphone before commencing to speak. For instance, instead of "Hullo" one would say, "HHHullo;" thus giving the relay time to close and put the carrier on the air.

A FEW THINGS TO WATCH.

Always use a Xtal that goes into oscillation quickly.

Grid-leak bias cannot be used on stages following the C.O.

In the case of a Class "B" Linear, a good bleeder resistor across the

power-supply is advisable. This may save your filter condensers while the carrier is off.

A separate supply is, of course, necessary for the C.O. In cases where the following stages are run from the C.O. supply this will stop that, and perhaps lessen the tendency to frequency modulation.

As the voltages to the Buffer and Finals are on all the time strict attention should be paid to the bias supplies, otherwise damage may occur to these tubes.

Well fellows here's the scheme. Let's hear some Break-in on the air in the very near future. And remember you will be doing your fellow Ham a great service by helping to clear up some of this QRM on the Amateur Bands.

Article Contest Results

The Magazine Committee has decided to award the donation of one guinea, as announced in the April issue, for the best technical article received by the end of August, to Mr. E. H. Cox, VK2GU. The N.S.W. Division generously donated the prize as an encouragement for more technical articles.

We would like to take this opportunity in openly thanking this Division for its support in this direction.

Mr. Cox has contributed some interesting articles dealing mainly with aeriels and has succeeded in throwing more light on this particular phase of experimental work.

His winning article entitled "Multiple Unit Antenna" in the August issue created much comment from the point of view of why some 28 mc aeriels are not as successful as they might be. As stated in the text, the old formulae for antenna lengths have not been found accurate enough for the higher frequency bands, and certain other factors must be taken into consideration. Those readers who have not closely studied his remarks are well advised to read Mr. Cox's article once again if they are desirous of bigger and better DX. Congratulations VK2GU.

Australian National Field Day

There seemed a definite need for a time set aside when Amateur's whose main ambition is to experiment with portable equipment, could try their skill. At the 1937 Federal Convention held in Sydney, it was decided to hold each year a National Field Day similar in many respects to the one held annually by the R.S.G.B. in the British Isles. As a matter of fact it was hoped that the Australian one, would coincide with the English one, but it seemed too much to ask Australian Amateurs to camp out in the middle of our winter.

December has now been selected and we hope to see at least 3 or 4 stations out from every division. The rules are concise, and don't forget to notify your divisional Secretary, re your location and call before November 1st.

RULES:—

1. The contest will commence at 1800 E.A.S.T. on December 4th conclude at 1800 E.A.S.T. on December 5th.
2. The contest is limited to portable stations operated within the commonwealth and its Mandated Territories.
3. A portable station shall be defined as one, whose power is not derived from either public or private supply mains, and shall not be located in any occupied dwelling.
4. Operation may be on any Amateur bands viz: 56, 28, 14, 7, 3.5. 1.7 M.C. and a station may be only operated on one band at any time, (two or more transmitters are permissible, but only one to be used at a time.)
5. No apparatus is to be erected on the site of the portable station earlier than 24 hours before the commencement of the contest.
6. The input to the final valve

coupled to the antenna, shall not exceed 25 watts.

7. A complete change of reports (R.S.T.) is necessary before any points can be claimed.
8. Application to operate portable stations must be made to the Secretary of the division of the Applicant by November 1st, giving Call and proposed location of the station. Copy of applications shall be forwarded to F.H.Q. and a complete list will be posted to all competing stations.
9. For the purpose of the contest N.S.W., Victoria, Queensland, Sth. Australia, W. Australia, Tasmania, Northern Territory and the Mandated Territories will constitute districts.
10. Contacts within a district are not allowable.
11. Points will be awarded as follows:—
 - a. For contact with a fixed station within the Commonwealth, outside competitor's state. 1 point.
 - b. For contact with a portable station within the Commonwealth, outside competitor's state. 4 points.
 - c. For contact with stations in Asia, North America, and Oceania outside Australia. 5 points
 - d. For contact with stations in Europe. 7 points.
 - e. For contact with stations in Africa and Sth America. 10 points.

Bonus A bonus of 25 points for each Continent worked shall be added to the total score.

The extent of each Continent to be decided as per the official I.A.R.U. W.A.C. Map.

12. Logs supplying the station worked, date, time, band and

(Continued on Page 28)

“Radio — and How!”

(By “Keypounder.”)

It was a warm November night—or should I say morning?—and on looking at my wrist watch I noted it was just on 2 ack emma. I switched down the rig to “twenty” and licked out a “CQ DX,” and was fortunate in landing an F8 and getting an R7 report. Which same made me quite elated.

After I finished with him, I went across to the map and looked up, with a ruler, the distance between myself and that F8. And when I got back in my chair I began brooding over the wonders of amateur radio.

All of a sudden I heard a scuffling noise at the door of my shack, and

I turned to see a strange looking figure entering the room.

He must have been nearly six feet high, and, to look at, had the physique of a champion wrestler. He wore some kind of close-fitting material, which covered him from head to foot, leaving only his face and hands free. He carried two small boxes under his arms.

“G—good evening,” I stuttered, surprised.

“Oh, hello, old man,” he greeted. “You VK4XZ?”

“Uh-huh!”

“Great!” said this he-man. “I’m PLX4AR, but, of course, you wouldn’t know that!”

RADIO CALL BOOK

Magazine of the World

Issued 4 times per year 9/6 per copy.
9d. postage.

*The ONLY book of its kind - official - authoritative
up - to - date*

CONTENTS

Systems for Reporting Signals
Amateur Prefixes
H/F, Press, Time and Weather
Who's Who - Commercial Frequencies
United States Amateurs
H/F Commercial Stations of the World
Nearly 100 Foreign Countries - all Call Signs

■ SEND FOR OUR FREE CATALOGUE

• MCGILL'S AGENCY •

183-185 and 218 ELIZABETH STREET, MELBOURNE.
(The G.P.O. is opposite.)

Amateur Radio

"Take a seat, feller," I said. "No, I'm sorry, I've never heard of PLX. Where's it situated?"

"Oh, I'm from Mars," he said, quite nonchalantly.

Now, I'm not the kind of guy that's easily bluffed, so I sez, quite angrily, "Now, don't give me that stuff, feller."

"Oh, I am telling you the truth," he smiles, "but for a moment, of course, you'll find it hard to believe. You see, I came down in my spaceship."

"Your what?" I exclaimed.

He beckoned over to the door, and, going outside, I took a peek at the spacious backyard, and there, to my surprise, saw an ultra-streamlined vessel, made of some kind of metal, and resembling somewhat a Navy blimp.

"It's radio-controlled," said my Martian friend.

"Gee! How long have you been coming down?" I asked.

"Well how long is it since you started with that FS?" he asked.

"About twenty minutes."

"Yes, I guessed it was about that. You see, I heard you call CQ, but I knew you wouldn't be able to receive my answering call, so I thought, having nothing better to do, that I'd drop down and have a look at this rig of yours, OM."

"Did you hear my twenty-metre sigs in Mars—on the level?" I gasped.

"Sure!" He tugs at a pocket in that queer suit of his and produces a small note book, which same is literally covered with call signs—PK, FS, G, OM, OZ, VE, Yanz, and nearly every country on the globe.

"You heard all them?" I asked.

"On twenty metres. Of course, forty isn't so hot on Mars now. I only heard about sixty countries on forty to-night."

"You heard sixty countries on forty?" I shrieked. "Ye Gods! If I hear five in one night its marvellous."

He nodded to one of the aluminium boxes he had with him. "That's my new superhet receiver," he told me.

We got it under the light, and Mars opened up the lid. It seemed to have about four tubes, with about five grid clips poking out of them each. Only had three controls on the front. One, so he explained, for volume, one for station selector, and one to switch in the beat oscillator.

"I'd like to hear it going," I said, "but, of course, our power lines may not fit."

"No power lines needed," he smiled, taking from the other box two small pieces of gear, somewhat like crystal holders. One had three pins, and was about two inches in diameter. The other had only two pins, and was about an inch in diameter. He plugged these into the respective sockets at the back, and then, taking a speaker, about the size of a microphone, plugged that into another socket, and switched on the set.

All the tubes warmed up, and presently we heard code signals coming through the speaker about R7.

"Only quarter volume," he said, advancing the volume control until it nearly deafened me. The signal we heard signed G5WX, and was calling TEST DX, so I slammed back on the rig, grabbed the bug, and ripped out his call as fast as I could hoot.

We told that G5 he was r-double max plus, and he called us all the ten different types of liars he could think of just then.

My Martian friend then went round the band, and if I didn't hear enough call signs to make a miniature log book, I'm nuts.

We clicked a few more fellers, after that. We told an LU, who was using six and a half watts, that he was R9, and a South African who was on portable work with suppressor phone on a 59, told us he couldn't possibly be R7 on phone on 20 in Australia. But after he got us to repeat some of the things he said he believed us.

(Continued on page 9.)

Federal and Victorian QSL Bureau

R. E. Jones, VK3RJ, QSL Manager.



"Hans" Hansen W9KNZ is surely unique. He writes Have been on the air since 1916 and never cared for DX, but all at once I find you VK fellows answering my early morning CQ's and find myself getting a great kick out of it."

Congrats to Ted Jenkins VK3QK who has just made W.A.C.

"Morrie" VK3BZ is staging a comeback after some years of inactivity, and has not forgotten the knack of landing DX.

Alf. Adams a listener for many years has now joined the ham ranks with the callsign VK3VJ.

Geo. Damman W9JO after some years of good work as the W9 QSL Manager has handed over to W9KA, Roy McCarthy, 11 S Michigan Ave., Vila Park, Ill. This advance information arrived through VK4GJ.

John Mills, VK3QB didn't like his fellow Maffra ham purloining his pet QSL design.

Another old timer to get under way is VK3WA, Warne Wilson of Ballarat. He is again amongst the DX. Lots of water has passed under the bridge since 3WA exchanged his first QSL in 1923 when he signed A3RY.

Rumours of a big International DX contest in 1938 are in the air. Prizes are reputed to be something special. F.H.Q. will probably spill the beans shortly.

Alan Brown, VK3CX, anxiously awaits a card from Delaware so he may add the letters W.A.S. to the

string already behind his name. My offer to supply him with a Delaware card in exchange for 12 contact QSL's from Iceland has not been accepted so far, although Alan offered 500 W cards.

Last month's list of cards awaiting a summary fate produced a fair response.

Cards for the following have been temporarily reprieved:—3AD, BL, CW, FN, GO, IL, JE, KA, KY, LN, LY, OZ, PA, RE, RL, XG, YF, ZO.

A stamped envelope to this Bureau, 23 Landale St., Box Hill, claims the undermentioned cards:—3AP, AT, BE, BS, BV, CA, CU, DJ, EA, ES, EW, FA, FB, FF, FM, FS, FT, FZ, GM, HB, JN, JR, KP, KT, LQ, LV, NB, NI, NF, NT, OJ, ON, QB, SG, SQ, TB, TW, UF, UX, UO, UY, VW, WB, WW, XU, XD, XZ, YG, ZB, ZC, ZI, ZZ.

ERRATUM

It is pointed out by Mr. E. H. Cox, that an error occurred in the printing of his notes on the determination of antenna dimensions in the August issue. Formula (2) on page ten should read:—

$$L = \frac{(N - .05) \times 492}{f}$$

The misprint in the original article would have been evident to all who read the text.

Bright Star Radio VK3UH
517 LOWER MALVERN RD.,
GLEN IRIS, S.E.8, VIC.
PHONE U1218.

Crystals Ground from Best Brazilian Quartz and Tested to 50 Watts Input to Penthode Oscillator.

Accuracy Plus or Minus 3 Kcs.
200, 160 Metre 10/-
80 Metre 15/-
40 Metre 21/5/-
Satisfaction Guaranteed.

A Brief Description of VK4RF

VK4RF obtained its licence in September, 1936 and since then has been very active on 7 and 14 mc.



Various types of rigs have been tried, the first being the good old T.N.T. which was scrapped after a month and was replaced by a "59" Tri-Tet straight into the aerial which was a $\frac{1}{2}$ wave zepp.

All VK and ZL districts were worked wld this osc but the op got the DX brig and added a "45" P.A. which was link coupled to the Tri-Tet.

Operating on 7 mc when conditions were "not so good" this station made W.A.C. in approximately one month.

Not satisfied with the DX on the Mc the op decided to build a new 14 mc rig this was done and is still in use.

The layout is as follows:—

6A6 osc and dblr, 6A6 push push dblr, link coupled to a "45" buffer—

The antenna is a 33½ feet vertical matched impedance job as is superior to other types tried hr for 14 mc.

The receiver is a 3 tube T.R.F. using 58,57 and 2A5 which uses a indoor vertical aerial.

VK4RF will hve been on the air 12 months on the 18th September during this period over a 1000 QSO's have been made, 450 of which were W's and the remaining 550 with 40 countries scattered over the globe. Some of the choice DX wrkd hr is:—

ES, TF, OZ, OE, OK, PA, YL, LU, VU, CM, U, UK, F, VQ, D, ZT, ZS, KA, J, G, GM, XU, LY, OH, VS, CR, YR, ON and MX.

4RF and WAC WBE and is an active member of the W.I.A. and B.E.R.U. and has just finished hitting up a good score in the D.J.D.C. Contest.

■ ■ ■ ■ HAMS !! ■ ■ ■ ■

SEE US FOR ALL YOUR REQUIREMENTS. ◀ WE GUARANTEE SERVICE AND GIVE SPECIAL PRICES TO ALL HAMS. ◀ WE ARE VICTORIAN DISTRIBUTORS FOR EDDYSTONE SHORT WAVE AND TRANSMITTING EQUIPMENT

◀ AN INVITATION IS EXTENDED TO INSPECT THE COMPREHENSIVE RANGE OF THESE PRODUCTS. ◀ WRITE OR CALL FOR A FREE ILLUSTRATED CATALOGUE. ◀ ◀ MANUALS 1/6 EACH.

P. & L. WIRELESS SUPPLIES PTY. LTD.
31 HARDWARE ST, MELBOURNE. (open Friday nights) F 4323

"And out of the Mouths of Babes"

by "Old Hombre"

Funny isn't it, some of you year, or two-year old acquirers of experimental licenses, when you come to think of it—how those pioneers of amateur radio literally sweated blood in laying the seeds of a playboys art, so that you and your kin could open up an entirely new era in this amateur radio game? So easy wasn't it; to get some unsuspecting amateur pal to get enough radio fundamentals into your belfrey inside those few expectant months, plus enough morse code coaching to make the examining R.I. take compassion on you, and reluctantly accept your fee for the coveted A.O.C.P.? You were more fortunate than your very recent brothers, who, after graduating, have perforce to actually do something about punching a key for six months, before being allowed to hurl their "personality" or "feetchure" voices into the air!—even though some of them did think that all they had to do was to keep mum until the probationary period was lapsed. You got in just before the reg amendments, and so you are able to smile superciliously as an exalted person, and in fact, a seasoned veteran, at your lesser lights. Of course though, you realise that by the time these fellows have stuck their probation through, they actually will know something about the morse code, and will probably delight in using it occasionally—poor saps. Not you though. You are going to show the world just what the modern ham is made of, and to you key work is just a penance and totally unnecessary. From the word go, you intend to spend all your amateur radio time just barracking for QSL cards on 20 metre phone, and when you get fed up with using your established call sign, you will conceive the bright idea of taking out another portable call. Of course you won't really do any portable work, but you will have long spells on both calls, so that the QSL cards will pile up and up. Friends Romans and Countrymen will know just what a marvellous fellow you are to have literally shattered distance ti-us, and will vote that Marconi and

his ilk were born long before their time!

Then when this DX business is a bit slack you will call in the girl friends and their swains as guest announcers, and will really have a wonderful time on both 20 and 40 metre phone along with Joe's station just across the way. Go QRP not you! The public just loves to hear your eloquent and intelligent voice, and so, if anything, you bump things up a bit on that final. You will never conclude any phone QSO without frequent splatherings of "That's the dope on that," "Okey Dokey Hunkey Dorey," "Kay someone please" and all the mysterious utterances that make your station so popular with John Q and Betty public, to say nothing of other hams. Other hams, on hearing your station, will immediately forego anything they might be doing on the air to listen spellbound to your clever emanations, and when you do reluctantly decide to pull your switches, and stay pulled for the night, they will sigh so deeply that such magnificence should be lost to the world! At times you will beat gongs as a demonstration that the BC stations don't have anything on you, and will pass knowing remarks with double meanings to the YL's at the other station. Oh it is all so splendid that those old time fellows who struggled along for so many years with more interest in morse code or apparatus design blazed the trail for you to indulge in all this splendour. They must have been saps not to see what would happen in the end (they darned well were!) and how you and your generation would change the whole status of amateur radio generally. And that indulgent old-timer you got so many good ideas from, and who showed you the blatant faults in that first receiver of yours—he will take it in great fun when you refer sneeringly to him over the air or even openly criticise him when he is old-fashioned enough to

(Continued on Page 25)

28 and 56 M.C. Notes

A. Pritchard, VK3CP.

During this month the 10 meter band has been excellent. The skip has lengthened giving us remarkable signals from all over Europe. Apart from G6DH, G2XC, D4XQF who are on each evening around 7 p.m., the VK3's contacted D4SLX, G5QY, G5R1, OH3NP, YL2CD, U9AV, UK-1CC, OE1EK, PAoAZ, OK2RM, G5-JA, U9ML, between 7 and 10.30 p.m. On Wednesday 15th September, G5-JA, PAoAZ, U9ML, G5QY were contacted here at 3CP from midnight until 12.45 a.m. 5QY reported a qso with ZL4DQ even later than this local time. Conditions are peaking now; there are dozens of w-cw harmonics from the HF end of the 20 mc band, showing that practically any power will give strong signals. VS6AH, VU2BA and SU1SG are also putting in fine signals. VK2UD is receiving good reports and qso'd PAoPN at 5 p.m. on 9th September. 2UD has 4 stages, '59 ECO, 59 buff., 46 buff., PP 46's final. VK2UC and VK2RA also have good sigs. From the States W9TTB and W6MDN are always r9. The former has 1 KW input with a Rhombic antenna on Australia and is putting the equivalent of 30 KW's our way ! ! !

The latter has quite a line up, 53 CO, 40 mx, 53 doub. 10, 756 buff., 808, 354 buffers, 354 PP class C.—800 Watts, modulated by Class B. '03A's—an H type beam on Aust. W60ZH has a vertically polarised beam, rotating on a 35' pole, a Johnson Q, with a director and reflector giving the extra gain. From VK6-VK-6FL, 6AA and 6SA keep up the good work. VK6SA made a good contact during the recent contest. K6ICL, K6OTH, K6CMC, L6LCV have been improving their transmitters. K6ICL has PP T 55's modulated by class B, T55's; K6CMC has PP HK154's with 250 watts input; his phone signals are r8 at 6.30 p.m. L6LCV has PP Taylor HD203A's k KW input, the modulator has a T55 driving Taylor T200's in class B, with a 500 watt varimatch mod. transformer. VK7AB

and VK5HG are on 10 again getting good results. As far as we know VK4 is the only State without activity VK2GU has been improving the doubler stages in his outfit. A T20 doub. from 40 to 20 mx with 600 V on the plate, has a resonance dip from 140 to 7 mills; and an 808 doub. from 20 to 10 mx, with 1700 V on the plate, dips at resonance from 170 to 18 mills, showing wonderful efficiency. 2GU can work duplex up to 100 AC from his own frequency. PP 100 TH's final ! ! ! Our old pal Snow of 3MR has been on 10 again for the contest—hi!—with a 6L6G doub. to 10, the grid current to the 50T final has doubled giving greater efficiency. From New Zealand ZL4FW, ZL1JD, ZL1HT, ZL4GN, ZL3DJ, ZL-2CI are giving us fb phone; the latter has a 3 stage rig. 6L6G co. 807 doub. HF100 with 100W. ZL1HT has a very small rig. although his phone is often r8, 6L6ECO, 45 final 10 watts input, modulated by a 2a5; the antenna has 2½ waves, with ½ wave counterpoise. ZL1JD and ZL3DJ have 100 watts on 56 mc, the former with PP T20's and the latter's line up is 6A6 CO, 6A6 doub. 5 mx, 807 buff., 35T final. The receiver is a National NC 100 with a converter to 5mx, 58, 57, 58—4,½ waves H type beam antenna, for 10 and 5mx. ZL4A0 has a diamond on Europe for 10 mx and this antenna should be excellent for Aust. on 5 also. At present J2IS is the only station from Japan; his signals peak at 6.30 p.m. Our old marker TDC in Manchuko is now JMN3 and is still on the same frequency, just out of the low frequency end of the band.

Dinner ! !

Remember Annual Dinner of the Victorian Division on the 30th October at Hotel Federal. Tickets are 7/6 and may be obtained from 3UK

Divisional Notes

To ensure insertion all copy must be in the hands of the Editor not later than the 18th of the month preceding publication.

N.S.W. Division

W. G. Ryan, Secretary, VK2TI,
Box 1734 JJ, G.P.O., Sydney.

Country Zone Officers.

Zone 1 (Far West).—J. Perooz,
VK2PE, Hope Street, Bourke.

Zone 2 (North-West).—H. Hutton,
VK2HV, Byron Street, Inverell.

Zone 3 (North Coast).—R. J.
Berry, VK2NY, 54 Bacon Street,
Grafton.

Zone 4 (Hunter River and Coal-
fields).—R. W. Best, VK2TY, 57 Hunter
Street, Newcastle.

Zone 5 (South Coast and South-
West).—R. Ross, VK2IG, 673 David
Street, Albury.

At the August meeting of the Division a lecture was given by Mr. A. Freeman, of the A.W. Valve Co., on "Transmitting Valves." Mr. Freeman discussed the use and operating characteristics of various materials used in valve manufacture, dealing more particularly with cathodes and plates, indicating the service to be expected with different types of valves.

Another interesting lecture was given by Mr. M. Lusby, VK2WN at the September meeting, the subject being "The Reflecting Layers." The members were introduced to an explanation of the manner in which the Kennelly—Heaviside and Appleton layers function in reflecting and refracting electromagnetic waves. Mr. Lusby also described some of the apparatus used by the Radio Research Board for examining these layers and their properties.

At this meeting the Division congratulated its Vice-President, Mr. F. M. Goyen, VK2UX on his approaching marriage and extended to Mr. Goyen and his future wife its best wishes for their continued happiness and prosperity. Mr. Goyen also received a presentation from the members of the Council.

The DJDC Contest produced some good scores from N.S.W., the number of contacts made by the leading stations being approximately as follows:—2ADE, 225; 2JX, 113; 2TI, 106; 2TF, 65; 2DA and 2VN, 45 each. A number of others "also participated."

The interest taken in this year's All-Band C.W. Contest was very disappointing. This contest would be one of the best if we could have about four times as many entrants from each state. The competition was keen for first place in N.S.W., 2RA winning by a narrow margin from 2NY.

By the time this appears the 1937 VK-ZL Contest will be in full swing, and from all accounts there will be a record entry from this Division.

We might mention in connection with the rules, that G8 and GW (Wales) constitute the 5th and 6th G. districts.

The Contest Committee for the 1938 VK-ZL Sesquicentenary Contest has been appointed, consisting of 2TI (contest manager), 2HP, 2RA, 2VN, 2YC. As an initial move the Committee has offered a prize of £1-1-0 for the best design for a QSL card advertising the 150th Anniversary Celebrations and the Contest.

Interest in 5 meters continues and the members are co-operating with the NZART in their trans-Tasman test at the end of the month.

STATION REPORTS

2DI Building new rig for 7 and 14 mc, using 808 final. Is the proud possessor of an oscillograph.

2JX, resting after DJDC. Puts out a very nice signal (ask 2YC, who lives a couple of blocks away) and works any DX that's on the air.

2NO has redesigned his 150 watt 56 mc transmitter and is now driving his PP 35T's with PP 801's. His 56 mc activities are chronicled elsewhere. Using automatic sending device for tests.

2PV works DX on 7 mc, best to date being a 3-way with VK6WH and ZT5G. Busy with exams, but manages to mix in a little stamp collecting. Receiver 9 tube super.

2T1 with PP 808's and a 10 tube super is a force to be reckoned with in any contest. Would appreciate information on how to straighten a pipe mast that curled up in the last windstorm.

LAKEMBA RADIO CLUB — VK2LR

By 2DL.

The following is the latest revised list of transmitting members of the above club:— VK's 2LR, 2AS, 2CL, 2DL, 2ED, 2EH, 2EV, 2FG, 2GM, 2HE, 2HB, 2IC, 2IO, 2JT, 2KS, 2LW, 2MH, 2NJ, 2OD, 2OI, 2OW, 2PX, 2QP, 2QX, 2SX, 2TG, 2TQ, 2UB, 2UC, 2VA, 2VW, 2WB, 2XD, 2XZ, 2ZR, 4XM, 2ABI, 2ABT, 2ACE, 2ACS, 2ACY (ex 2CY), 2AFU, 2AGR, 2AHE, 2AFK. Non-transmitting members number 28.

A graphic account of the recent New Guinea earthquakes was given by ZL4GL who visited the club last month. 4GL was operator on board a ship which was cruising in the vicinity at the time of the eruptions, and he did very good work in relaying the messages when land stations had been put out of action.

As a departure from the usual lectures on radio, Mr. J. Warren, 2QX, gave a talk on "Air Condition-

Have you
Received
Your Copy?

VEALLS 1937 Radio & Electrical Catalog Free

With 88 Big Pages packed with hundreds of Radio and Electrical items, and with over 500 illustration, a copy of Vealls Big No. 37 Catalogue should be in the hands of every Radio Amateur and Handyman. Your copy is free. Merely enclose a 2d. stamp to defray cost of postage. If your name is not recorded on Vealls special concession list enclose your QSL Card.

VEALLS Four Big Stores

243-249 Swanston St.,
Melbourne.
168 Swanston St., Melb.
299-301 Chapel Street,
Prahran.
3-5 Riversdale Road,
Camberwell,
Cent. 3058 (7 lines).

Amateur Radio

ing" at the last meeting. The lecture proved very popular as was evident from the number of questions which were asked.

PUBLICITY NOTES.

WAVERLEY RADIO CLUB.

By VK2ABS

Our new 10 tube receiver is in action, raking in the DX in fine style, consequently the club's transmitter, VK2BV, has been very active lately on 7 MC OW. Work has been started on our new transmitter under the able direction of our President Mr. G. Wells, and promises to be something "out of the bag." We advise DX listeners to instal wave traps tuned to our frequency!

The meeting held on 7th September, was the occasion of a very interesting lecture by Mr. A. Gibbons, VK2BT, on "Antenna Design" and everyone is now contemplating installing concentric cables and vertical radiators!

Two of our most enthusiastic members, George Patterson and Arthur Pearce, have obtained their tickets—congratulations from all the members. We predict severe QRM in the Randwick district very soon.

2AHB lost no time in getting on the air, and has already filled a few pages of his log. Good luck, Arthur. 2AFG has gone all QRO with a 6L6 oscillator and an AL3 P.A. with 15 guaranteed watts input, but finds it difficult to get good efficiency with plug-in tank coils.

2EG has been rather scarce lately—is it YL-itis?

2OH paid us a visit from the back-blocks. Welcome, Bruce, even if we can smell the gum leaves.

2AFZ when not entangled with the law, works duplex with 2YF, who lives 250 yards away—some DX Eric!

2ABS has packed up all the junk and gone to live at Artarmon, and finds it a good place for DX and also

key clicks. Local hams—please note!

George Patterson has parted company with his 30/- and is now feverishly awaiting his call. He intends to use 6L6 osc. and 210 P.A.

ZONE 4.

By VK2TY

2DG got quite a write-up. Apparently 2DG has been keeping a sked with a K7 for weeks on end and some news hound sniffed it and lo: 2DG in the news. Contact with outside world and all that dope.

2JZ of Singleton has become a big BCL owner. "The Voice of the Hunter."

Heard 2YO from Pelaw Main calling CQ on 40 the other night. Nice fone too.

The NARC has decided on some competitions for the entertainment of its members. Philips Lamps (Aust.) Ltd., gave a very nice 15 watt Pentode with a type number, which would fill this column. Lawrence & Hansen Elec. Co., donated an open order for £1-1-0, and Martin de Taunay Pty. Ltd., an open order for 10/6. These will make good prizes for the boys to get enthusiastic over.

The Club is also donating a couple of bottles for 2nd and 3rd prizes in the contest for the Philips tube. Incidentally Philips have always been exceptionally good to the NARC, and never fail to come to light with something for the gang.

2ZW is back on the air using one of those QRP bottles—An 852.

2QS got his cart wheel double-botton mike working, or so he says, I think, from what the Wireless Bird tells me, that it was a P.M.G.

Say Gang, what about those report sheets?

**SUPPORT YOUR
ADVERTISERS!**

**AND MENTION
"AMATEUR RADIO"**

QSL Cards!

Although the cost of pasteboards has risen we are able to supply Hams with first quality verification cards still priced lower than elsewhere.

COMPLETE PRICES

ONE COLOR Ink, on White or Tinted Board:—

250 12/6, plus sales tax 6d; £ — 13 - 0
500 15/6, " " " 7d. — 15 - 7
1000 22/6, " " " 11d. 1 - 3 - 5

TWO COLORS in Ink, on White or Tinted Board:—

250 18/9, plus sales tax 9d; £ — 19 - 6
500 22/6, " " " 11d. 1 - 3 - 5
1000 33/9, " " " 1/4d; 1 - 15 - 1

We pay Freight etc. . .

Write enclosing Copy and Remittance to

ELSUM PRINTING COMPANY

1025-7 WHITEHORSE RD, BOX HILL, E.11, Vic.

M.W.I.A.



ZONE 5 NOTES

VK2IG

DX rolling in here in great style and conditions good for the DASD test. Plenty of new Europeans worked by 2QE.

2QE remodelled rig and is getting out better than ever and doing a good job in the German test. Has YR, I, PK6, 5P for new ones. F.B. Alan o.b.

J20. Only on for fone skeds on Sundays, has fine big fone now.

2EU still on fone on 40 meters, but going on 20. Gets a gud signal to W.

2QD not much heard from Hilton, but is getting out O.K. on SE.

2AFD too busy for Albury Show to do any xmitting.

2IG Qrt while altering rig. Was on in DJDC with fair results.

No reports from rest of the ENTHUSIASTIC Zone 5 chaps.

mitter for 3WI, but we expect to have something definite after the UHF meeting next Tuesday.

It has been suggested that the 56 mc field day, be held on the National Field Day, December 4. It is thought what this arrangement offers greater opportunities for 56mc, DX and the country gang are especially asked to co-operate. Again 3PS, on the lower frequencies, will be pleased to hear from any country chaps interested and will be able to advise of further details and arrangements.

A 56 mc test, VK2—ZL has been arranged for September 25, but, no details of this are as yet to hand, however, we will be on the look-out for anything that may come through.

We are very pleased to have our chairman, 3DH, with us again; Ivor says he is rebuilding all his gear and will be glad to be on the air again. will be held on Tuesday 19th. so roll up and bring your ideas.

MALLEE AND NORTHERN DISTRICTS.

3ZE—3HY

3EP still working on 80 mx and putting out a very FB sig. Ted has taken to Xtal grinding like a duck to water as evidenced by the number of Xtals Ted has.

3FF & 3TS are mainly working on 20mx with excellent results. Tom and Jock are busy on a modulator.

3BM has made his debut on 80 mx fone with first-class quality. Bruce tried nearly every type of mike before deciding on a Xtal.

3KR on a recent visit to 3BM didn't like the look of Bruce's sky-wire so procuring a pair of pliers generally rebuilt the sky-wire much to Bruce's delight. The result was stability and alround better performance.

3OR has not been very active as Murray has had a bad attack of 'flu. Murray has a special high frequency rig in the course of construction, but the 6L6G refused to oscillate.

Victorian Division

UHF SECTION NOTES.

By 3JO

Once again we have to report very little activity on 56mc, however, now that warmer days and nights are here, we can be sure of increased activity in the near future.

Stations at present operating, are always on the lookout for others to join in multi-way contacts, and it is suggested that calls be made at half-hourly periods starting from 1900 in the evenings, and 1000 on Sunday mornings.

One of the most active stations, 3PS, is on the job nearly every evening at 2030, and at 1100 on Sunday mornings. He is also active on 3.5—7—14 mc and will be pleased to have a call from anyone interested, but not yet active on the UHF's.

No further information is to hand re the frequency meter or the trans-

Amateur Radio

3HR is back on the job again with fone on 80 mx quality rather good.

3WN is usually on sked on Sunday mornings on 80 mx otherwise Jack is not very active; is pleased with the possibility of getting AC.

3CE has been working plenty of Dx on 20 mx. Keeps a sked with 3DG on 80mx every week.

3KI we understand is still on 20mx and getting excellent reports from W. Jack has a particularly fine V beam directed towards that place.

3IH working mostly on 80mx fone. Fenton has decided to rebuild his rig. Had a CL4 flash over and give up the ghost.

3ZK makes an appearance two or three times a week in spite of being QRI.

3HX not particularly active, but is planning alterations in preparation of taking 20 mx by storm. Some don't believe it but nevertheless its true.

GIPPSLAND NOTES.

VK3BR: Jack has made a start, layed out rig but very QRL.

VK3DG: Working usual sked with 3CE on 3.5 mc, but not on much.

VK3GO: Not heard of late, want to hear from you Graham.

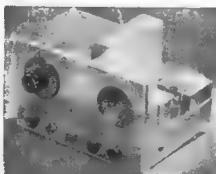
VK3LY: Not heard of late, qrl at 3 TR B class.

VK3SS: Keith on with 6P6 Osc and 6L6 PA now and putting fb sigs into ZL on 80. complains that he can-

Build a Real Communications Receiver "THE RADIOTRON EIGHT"

Fully described in June and July "Radio World"

- RF Stage
- HF Oscillator
- Iron Core I.F.Ts
- B.F. Oscillator
- Fully Shielded



- Built In Speaker
- Stand By Switch
- Hum Free
- Band Spread
- Plug In Coils

This highly efficient Amateur Communications Receiver, was designed by the Engineers of the Amalgamated Wireless Valve Co. Pty. Ltd. and first announced in "Radiotronics" No. 75.

Complete Kit of Parts
Including Wound Coils Speaker
and Radiotron Valves.

£18 Nett
F.O.R.
Sydney

WRITE FOR DETAILED LIST OF PARTS OF PARTS FOR THE RADIOTRON EIGHT
Completely Assembled and Tested £25/10/- nett.

PRICE'S RADIO SERVICE

D. G. McINTYRE

5 & 6 Angel Place

Sydney

not work any VK's on that band. Fone on the way so look out then.

VK3QB: Jack has also rebuilt rig now using 42 CO and 802 pa and going to apply for fone permit, had over 100 qso's during first month on, but has eased off of late.

VK3XH: A new ham at Sale, Stan Johnson, not on air yet, but will be accorded a welcome as since getting his ticket has taken pity on hams and has cured that R max harmonic of TR local broadcast station on 80 mx. Congratulations om hpe to hear you soon.

SHORT WAVE GROUP NOTES.

by O. E. Davies.

Members of the group continue to show their interest in Ham Radio. And the meetings of the past few months have drawn very good attendance.

At the meeting on August 11th Mr. Stevens gave a very interesting address on "Inductance and its application to Wireless Communication." This was so much appreciated by the members that Mr. Stevens obliged with a further talk on the same subject at the meeting on August 25th.

At the meeting on September 8th, a very interesting discussion took place on the merits and operations of "Grid v Plate Detectors." Several members took a keen interest in the debate and much valuable data was discussed.

At the next meeting in October an endeavour is being made to secure an interesting lecture for the evening. The Council have allotted this night, October 13th, as the Quarterly General Meeting of the Victorian Division. Remember the date and make a genuine effort to attend.

A roster has been drawn up and every member is responsible for a talk, or lecture. The present roster is complete to December 22nd, so don't fail to attend the fortnightly meetings. Remember, the Second and Fourth Wednesdays in each month.

Ron Higginbotham has now completed his Super-galner. Gets good

sigls too, at least so he tells us.

George Budden logging DX on 20 mx. Heard some Gs t'other night.

Herb. Stevens reports 5mx pirates. Says they sign VK3OK. Well at least they sound OK.

Alan Anderson busy cleaning house.

Vic. Smith still swotting A.O.P.C.

Ron. Chard ditto.

Rest of the Gang trying to rake in the weak sigls that you never seem to hear sign a call. Some of these lads go on for hours at a time it seems.

By the way look out for us on 80 mx. We hope to make a show up there any time now.

Queensland Division

via 4AW-3ZC.

Fresh history was written in ultra high frequency communciation in VK when in August contact was established between parties at Montville and Springbrook, a distance of 109 miles.

VK4AW and VK4HR were responsible for this good work on 56 mc. Contacts were also established between Springbrook and Brisbane 58 miles Montville and Brisbane 52 miles and Springbrook and Toowoomba 99 miles. The elevations of Springbrook and Montville are 3,000 ft and 1,500 ft respectively.

Those taking part were VK4RY Mt. Cootha, VK4WI Mt. Gravatt, VK4LX Ascot of Brisbane, VK4UZ Toowoomba, and the previously mentioned 4HR and party Springbrook and 4AW and party Montville. This success was the result of an organised field day on the part of the Queensland Division. Another effort is set down for 26th September when the distance is hoped to be increased.

Several members have signified their intention of attending the ham-fest to be held at Toowoomba 16th and 17th October where the local

Amateur Radio

boys will be met and much reg-chewing is eagerly anticipated.

Arrangements have been made to visit the local shacks, broadcast station, and other places of note.

Conditions during the all-band cw contest were fairly good although there did not seem to be the number of stations taking part that should have been. VK4AW, 4CG, 4UR, 4JF, 4NO were prominent in VK4 apart from 4AW's score of 880 the others are not known as yet.

The sudden burst of activity on 56 mc seems to have left its mark permanently at least we hope so. Sunday evenings at 7 p.m. has been set aside for across town ragchews and it is quite common to hear 4LX, 4GU, 4RY, 4AW, 4RC, 4WT and gang contacting from home locations.

The boys journeyed once more to the Kingston motor-cycle circuit 11th September to attempt the impossible i.e. contact through 5 miles of densely timbered country at low elevation. About 3 miles appears to be the limit through this class of country.

Talking of new rigs 4LX is all het-up with the new outfit, 6L6G tritet 6L6G doubling 801 final. He has been getting out well on 56 mc using 801 self excited into a Sturber beam. 4GU has a Bruce beam working on 56 mc and a portable for all band operation.

4WT building a new receiver and taking up wrestling. We understand some prominent mat men have been reported leaving for other states.

4UL replaced his 6L6's with G type with an improvement in his modulation.

4UR has been burning the midnight oil and working the DX. Don't overdo it Jack.

4JF seems to specialise in 80 metres least so in the last contest.

4AP has been off quite a time and we believe for quite a while to come yet.

4RY has 807 working on 10 and 5 modulated too. Just at the moment off to Sydney for a week or so.

4WH Longreach was in VIB on holiday and visited some of the shacks. He reports some fine doings on 28 mc with a Reinartz beam.

4LK and 4GU have both deserted the ranks of bachelorhood. 4LK and 4GA just returned from holiday at Cairns where he met all the local gang.

4JW of Charters Towers brewery and spark coil fame has shifted to Cairns where we hope to hear him on AC.

4AW reports contacts on all bands from 5 to 160 on 12th September. Pity the 5 metre was not interstate. Has a 5 and 10 super working to a nicety except for car ignition QRM.

South Australian Division

By VK5KL via VK3MR.

During every year some very interesting lectures are placed on the syllabus for members to attend, but the popularity of those given by Professor Kerr Grant leaves nothing to be said.

MILLFORD RADIO CO.

PHONE: BRUNS. 1247.

TRANSMITTING AND RECEPTION APPARATUS BUILT TO SPECIFICATIONS. ALSO REPAIRS TO POWER TRANSFORMERS, CHOKES, ETC. QUOTATIONS GIVEN.

381 Sydney Road, [opp. Post Office] Brunswick

On September 8th, in the physics room of the University members attended a demonstration of the uses of the cathode-ray oscilloscope. These proved most learning to those chaps who had never before seen one in action. Professor Kerr Grant and his assistants were heartily applauded at the conclusion and thanked by Mr. Luxon and Mr. Whitburn. An inspection of the gear then followed. Arrangements for an outing on Labour Day have not been finalised, but no doubt something will eventuate. So far, a new president has not been chosen for this division. It is surprising how these positions are rushed to be filled! A competition over a period of three months is in progress between country and city hams. This should bring those chaps in the country in closer touch with the city chaps. . . . The all band cw contest proved a tussle between VK5KL and VK5JT for leadership in VK5. Final scores are not to hand. Those also heard going strong were 5LD, 5ZX, 5LL and five hot dogs! A demonstration of 5 mx oscillators was held on September 15th by the U.H.F. section. The output for a given input was measured on each individual oscillator and some very interesting data was gathered by those present. The members of this section intend co-operating with VK2 on their Saturday night 5mx skeds. Many intensions of putting up Yaggi beams are in the breeze. Mr. Bourne 5BU during a holiday at Kangaroo Is. took a 5 mx receiver with him. Except for parking himself each night at the end of the jetty in pouring rain, nothing was heard! This month sees once again the dx contest with the numerous contacts with our friends across the sea.

Conditions on ten metres is improving and several yank fones are coming through well. One afternoon, VS1AA and ZE1JU were heard at good strength. This band should be more used than at present. Try it chaps and gain the thrill of exploring pasture anew.

Some good scores in recent all band cw test.

Conditions were good on all bands except 28 mc. 6SA had it all his own way on that band by working

all states, whereas it is almost impossible for the Eastern states to work more than three and perhaps only two . . . Scores. VK3MR. 1480 pts. 5KL 1230, 2RA 1318, 6SA 1430, 2NY 1250?

6SA's work is as follows.

5	States on	28 mc.
5	"	" 7 mc.
5	"	" 3.5 mc.
4	"	" 14 mc
3	"	" 1.75 mc.
3MR's work.		
2	on	28 mc.
6	"	" 7 mc.
5	"	" 3.5 mc.
5	"	" 14 mc.
5	"	" 1.75 mc.

It will be interesting to learn how much better VK7AB has done these, as he showed good operating sense and should easily beat the above. Others who are inclined to be above are 3ZC, 3HG and 4AW and 4UR.

VK5 COUNTRY NOTES.

By VK5PN.

VK5FB.—Frank reports that the QSO contest is going well and is extremely popular with the Country men.

Believe Frank will be sitting for the 2nd class ticket soon.

5GW.—Still dormant, but will soon be on the job.

5LC.—Les very active, both on fone and C.W. usually on 7146kc. This is a real low-power station, not more than 5 watts; lowest in VK5.

5RE.—Must be about the most experienced of the Country "hams." Been on C.W. and fone for many years, but still finds honest enjoyment in rag-chewing. A Returned Soldier; I wonder how many Ret-Sold. "hams" there are altogether.

5WG.—Wally studying for 1st Class ticket.

5PB.—Quiet lately. but will soon be busy again.

Amateur Radio

5NW.—Bob keen on winning the Brandon QSO contest and after having alternate weeks silent, manages to annoy the boys by catching up again.

5BK.—Heard consistently on very nice fone; somebody said, power 7½KW, but we have not heard him keying it yet ! !

5QR.—Met Reg. in the city recently. He attended a lecture on Cathode Ray Oscillographs, together with 5RT.

5RY.—Gone from Whyalla to new QRA near Sydney.

5RJ.—Darce heard piling up points in the contest.

5MP.—Len also hard at it on CW. Must have a good number of points now.

5YM.—New man gradually breaking through the ice: Give him a call chaps.

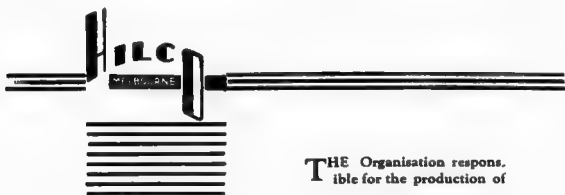
5FW.—Very nice new rig nearly ready for the air.

5JK.—Should soon be on the air.

5XR.—Cam and 2nd op still do a bit, but busy re-building receiver and preparing for AC.

(Continued from Page 14)

observe occasionally that there should be some law and order about amateur radio. His ideas that amateurs should be really proficient operators in case of emergency are only said for the sake of saying something. He surely cannot mean it. Earthquake, fire, flood, War—they can never come to Australia. His "Be Prepared" motto based on actual experience of emergency work and even War years ago, are really not important. In any case, you have been on the air a full six months or a year, and know all about this amateur radio game. And so you just switch everything on, grab that mike and go on and on and on—Until!



*The Power
Equipment with a
Powerful
Reputation*

THE Organisation responsible for the production of

**Hilco Transformers
Chokes etc.**

has proved its high standards for an article of extreme merit as accepted by the largest consumers in Australia.

**All Products Guaranteed
for twelve months.**

Hilco Transformers Proprietary Limited

**97-111 Berkeley St, Carlton, N.3, Vic. Phones F 1661-2
CABLES & TELEGRAMS "HILCOY MELBOURNE"**

Your Guarantee

of RELIABILITY and ACCURACY

There are Siemens-Elliott
Radio, Switchboard, and
Recording Instruments for
every requirement.

Each one is guaranteed
**absolutely Accurate and
Reliable** by the name...



SIEMENS-ELLIOTT

SIEMENS (Australia) Pty. Ltd.

**SYDNEY MELBOURNE BRISBANE ADELAIDE
NEWCASTLE**

H. C. Little & Co. Perth: W. & G. Genders Pty. Ltd. Tasmania

Agents for THE ENGLISH ELECTRIC CO LTD., LONDON

R.A.A.F. Wireless Reserve Notes

Officer Commanding: Flying Officer R. H. Cunningham, 397 High Street, Glen Iris, S.E.6, Victoria (VK3ML).

District Commanders—

Second District, N.S.W.—A. G. Henry, Clareville Avenue, Sandringham (VK2ZK).

Third District, Victoria—Pilot Officer V. E. Marshall, 3 Myrtle Avenue, Kew (VK3UK).

Fourth District, Queensland—A. E. Walz, Sandgate Road, Nundah (VK4AW).

Fifth District, South Australia—F. M. Gray, 52 Ormond Grove, Toorak Gardens (VK5SU).

Sixth District, West Australia—J. Mead, 111 Gerrard St., East Victoria Park, W.A. (VK6LJ).

Seventh District, Tasmania—R. Cannon, Goldie Street, Wynyard (VK7RC).

VK3UK-3Z1

Owing to the fact that the details of the new organisation have not yet been finalised, the holiday that VMC has been having has been extended for a further three weeks. Thus the Sections will be able to start off immediately on the new schedules. 3Z1 has a twelve weeks training program. The October meeting of this section drawn up so that every member will be at the same standard as the others and 1938 will start with everyone having a thorough grip on the new scheme.

The details of the National Field Day, published in this issue will be received with delight as we have long felt the need for such a test. Practically all VMC members have portable equipment available and we will be running a side contest at the time. The opportunity is a great one for putting the experience gained in the use of portable gear to practical use and for those who will be 'on location' for the first time, a lot of valuable information will be gleaned. Apart from ordinary Ham ranks Victoria's entry will be around the twenty mark from the Reserve alone, so you interstate fellows should have no dearth of VK3's to swell your total.

3F9 made a hurried trip to the city this month and we were able to have a long talk about Reserve doings. Since Ivan took up golf, he finds it hard to decide in his mind whether golf or tennis holds pride of place. To those of us who play golf (I was nearly going to say 'were golfers'), we have no doubt in our minds.

3D3 spends a great deal of time on 56 mc these days and gets out well.

3Z1 has two Eimac 50T's in PP ready for the Trans-Tasman tests. Only ICW will be used and the automatic sender will be left running during certain periods.

1A1 will be taking a receiver to Geelong with him during the Trans-Tasman tests, but he will only be using a $\frac{1}{2}$ wave portable aerial on the car. It will be interesting to see if he hears any of the Melbourne gang, as no 56 mc signals have yet been heard down there across the water.

We are hoping to have a number of the country men down in the city at the end of the month during the period of the Show. So far word has not come through of who will be down.

Support our Advertisers

Amateur Radio

(Continued from page 11)

TRANSMISSION SCHEDULES.

October, 1937

Sydney Time. G.M.T.

VK2ME, Sydney.

Sundays 3.30p.m.-5.30p.m. 0530-0730

" 7.30p.m.-11.30p.m. 0930-1330

Mondays 12.30a.m.-2.30a.m.

1430-1630

VK3ME MELBOURNE

Melbourne Time G.M.T.

Nightly 7 p.m.-10 p.m. 0900-1200

Monday to

Saturday

(inclusive)

VK6ME, PERTH.

Wavelength 31.28 metres

(9590 Kc/s).

Perth Time G.M.T.

Nightly 7 p.m.-9 p.m. 1100-1300

Monday to

Saturday

(inclusive)

(Continued from page 9)

power used, signed by the operator or operators shall reach F.H.Q. not later than 31st December, 1937.

12. The decision of F.H.Q. in all matters pertaining to the contest shall be final.

13. Awards.

A cup will be awarded to the outright Australian winner by F.H.Q. and suitable certificates to the winning station in each state.

VK3 General Meeting

A general meeting of the Victorian Division will be held at the W.I.A. rooms on Wednesday, October 13th.

The Short Wave Group, who are the hosts for the evening, have undertaken to provide a lecture. The winner of the Gadsden Trophy is to be announced, and other important announcements are to be made. All members are urged to attend.

QUARTZ CRYSTALS

Every Crystal tested to 50 watts input to Penthode Crystal Oscillator
Accurate grinding to .03 per cent. 3.5 M.C., 20/-; 7 M.C., 30/-
100 K.C. Xtals. 465 K.C. Xtal "Gates. Prices on application

PROMPT DELIVERIES

MAXWELL HOWDEN (VK3BQ) CONS. RADIO ENGR.

13 Balwyn Road, Canterbury, E.7.

Amateur Radio

Hamads

Advertising space in these columns is available to those wishing to sell, buy or exchange, at 3d. per line; approximately five words to the line. Minimum charge, 1/-. To ensure insertion enclose postal note or stamps with copy, and address to the Advertising Manager, "Amateur Radio," White Horse Road, Box Hill, E.11., Victoria.

BRIGHT STAR RADIO, VK3UH, 517 Lower Malvern road, Glen Iris, S.E.6. Crystals ground from best Brazilian Quartz and tested to 50 watts input to penthode oscillator, as used by leading experimenters and DX Stations, accuracy plus or minus 3 KC's,

200, 160 metre	15/-
80 metre	10/-
40 metre	£1/5/-
465 Kc Xtal Gates	£2/-/-

Power Transformers constructed specifications. Receivers and Transmitters constructed. Super-Hets aligned. Triad first quality 866 Mercury Vapour Rectifiers, 7500 volts peak, £1/1/-. National Type, N dials, £2 each. Taylor T55 Triode Transmitting Tubes, 55 watts plate dissipation, 170 watts RF output on all frequencies up to 30 MC's. Price, £4/4/- each. All types of meters repaired. Call or write above address Phone U1218. Satisfaction guaranteed.

CRYSTALS. Best Quality X or Y Cuts 80 Meter £1. 40 Meter £1. Only best imported Quartz used. Cash with Order. P. R. Watson, VK3PY, Box 49, Warracknabeal.

XTALS by W9ADN, 80 at £1; 40 BT £1; RF Chokes by ON4DJ, 10/200 MX 175 MA, 2/9. 5MX, 1/11 BUGS, as Vibro, steel base, 35/-. KEYS, as P.O, nickel-plated, 15/-. VK3RJ, 23 Landale St., Box Hill, Vic.

WHEN YOU WANT THE BEST



No. 999. Aerial Strain Insulator, made of Statite for strains up to 400 lbs. 1/6 each



Slow Motion driving head No. 1012 has a ratio of 9:1 and is useful where speed reduction is required, 8/6 each



Low loss aerial lead-in tubes Nos. 946 & 972 provide that very necessary low leakage path for transmitting and receiving aërials. 946 5 3/4 in. long at 3/3; 972, 11 in. long 3/9

EDDYSTONE — RADIO COMPONENTS

Australian Representative:

R. H. CUNNINGHAM, VK3ML, 397 High Street, Glen Iris, S.E.6
SERVICES—N.S.W. Price's Radio Service, Angel Place, Sydney. Victoria, P. & L. Wireless Pty. Ltd., Hardware St., Melbourne. Tasmania, W. & G. Genders Pty. Ltd., Launceston and Hobart. South—Aust. Flinders Radio, 102 Flinders St., Adelaide. Queensland, J. B. Chandler & Co. Pty. Ltd.



Are you a Member?

Subscriptions to the W.I.A. (Victorian Division) are
as under:—

Full Member, 20/-. Associate Member, 16/-.
Country—Full Member, 14/6; Associate Member, 8/9
Student Member, 7/6. Entrance Fee, 2/6

Write to Secretary, Law Court Chambers, 191 Queen St., City .